

Title (en)  
Thin film transistor substrate and display using the same

Title (de)  
Dünnschichttransistorsubstrat und Anzeigevorrichtung damit

Title (fr)  
Substrat de transistor à film mince et afficheur utilisant celui-ci

Publication  
**EP 2911196 B1 20201021 (EN)**

Application  
**EP 15156254 A 20150224**

Priority  
• US 201461943628 P 20140224  
• US 201514628378 A 20150223

Abstract (en)  
[origin: EP2911196A1] The present disclosure relates to a thin film transistor substrate having two different types of thin film transistors on the same substrate. A thin film transistor substrate includes a substrate; a first thin film transistor disposed on the substrate, the first thin film transistor including a poly crystalline semiconductor layer, a first gate electrode over the poly crystalline semiconductor layer, a first source electrode, and a first drain electrode; a second thin film transistor disposed on the substrate, the second thin film transistor including a second gate electrode, an oxide semiconductor layer over the second gate electrode, a second source electrode, and a second drain electrode; and an intermediate insulating layer including a nitride layer and an oxide layer on the nitride layer, the intermediate insulating layer disposed over the first gate electrode and the second gate electrode and under the oxide semiconductor layer.

IPC 8 full level  
**H01L 27/12** (2006.01); **G02F 1/1362** (2006.01); **G02F 1/1368** (2006.01); **H01L 29/786** (2006.01)

CPC (source: EP KR US)  
**G02F 1/13624** (2013.01 - EP US); **G02F 1/1368** (2013.01 - EP US); **H01L 27/1225** (2013.01 - EP US); **H01L 27/1248** (2013.01 - US); **H01L 27/1251** (2013.01 - EP US); **H01L 29/04** (2013.01 - US); **H01L 29/78645** (2013.01 - KR); **H01L 29/78675** (2013.01 - US); **H01L 29/7869** (2013.01 - KR US); **H01L 29/78696** (2013.01 - KR); **H10K 59/12** (2023.02 - US); **G02F 1/13685** (2021.01 - EP US); **H01L 21/8221** (2013.01 - US); **H01L 27/1214** (2013.01 - US); **H10K 59/12** (2023.02 - EP KR)

Cited by  
KR20170026744A; EP3270417A1; US9985082B2; US10388710B2

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**EP 2911196 A1 20150826**; **EP 2911196 B1 20201021**; CN 104867933 A 20150826; CN 104867933 B 20181211; CN 204464281 U 20150708; KR 102186065 B1 20201207; KR 20150101403 A 20150903; KR 20170004935 A 20170111; US 10325937 B2 20190618; US 2015243686 A1 20150827; US 2019237493 A1 20190801; US 2022190003 A1 20220616

DOCDB simple family (application)  
**EP 15156254 A 20150224**; CN 201510087377 A 20150225; CN 201520115400 U 20150225; KR 20150025953 A 20150224; KR 20160182516 A 20161229; US 201514628378 A 20150223; US 201916377136 A 20190405; US 202217687537 A 20220304